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Reply to Office Action of Sept. 9, 2005

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REMARKS/ARGUMENTS

The Examiner has attached a requirement to the Office Action in which he objects to the information disclosure statement filed August 23, 2001 as failing to comply with 37 C.F.R. 1.98(a)(2), and requires the submission of each non-patent literature publication or that portion which caused it to be listed. Specifically, the Examiner objects to the absence of copies of <u>Box 1976</u> (Box, G. E. P. and G. M. Jenkins, "Time Series Analysis: Forecasting and Control," San Francisco, Holden-Day, Inc., 1976) and <u>W. H. Greene</u> (W. H. Greene, "Econometric Analysis," Prentice-Hall, Inc. 1997) books, which were not readily available at the time the IDS was filed. Copies of the relevant portions of each publication are enclosed herein.

In the specification, several paragraphs have been amended to remove certain informalities pointed out by the Examiner in the Office Action. Several other paragraphs have been more extensively amended to clarify certain aspects of the invention. No new matter has been added. Support for the amendment to the paragraph beginning at page 3, line 12, may be found at page 5, lines 15-28 of the specification. Support for the amendment to the paragraph beginning at page 8, line 17, may be found at page 8, line 30 - page 9, line 11 of the specification. Support for the new paragraph to be inserted after the paragraph that ends at page 8, line 29 may be found at page 8, line 30 - page 9, line 11 of the specification and also at page 724, Col. 2, line 30 - page 725, Col. 1, line 13 and page 726, c. 2, l. 10 - page 728, c. 1, l. 4 of Basara, Lisa Ruby, "The Impact of a Direct-to-Consumer Prescription Medication Advertising Campaign on New Prescription Volume," Drug Information Journal, 1996, Vol. 30, 715-729 ("<u>Basara</u>"). The disclosures of <u>Basara</u> are included in the specification by reference. (*See* Specification, p. 2, l. 26-27).

The drawings have been amended to mirror the amended specification. No new

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matter has been added.

In the Office Action itself, the Examiner has rejected claims 1-17 under 35 U.S.C. § 101 as lacking pertinence to the technological arts and failing to produce a useful, concrete, and tangible result.

The Examiner has also rejected claims 1-17 under 35 U.S.C. § 112, first paragraph, as allegedly insufficiently enabled by disclosure in the specification as some of the steps rely upon subjective human input and results vary depending on that input, and the specification contains no guidance for those performing the method. The Examiner has also rejected claims 1-17 under 35 U.S.C. § 112, second paragraph, for allegedly failing to particularly point out and distinctly claim the invention.

The Examiner has rejected claims 1, 3-7, and 9-10 under 35 U.S.C. § 102 as being anticipated by Basara. Alternatively, The Examiner has rejected claims 1, 3-7, and 9-10 as being anticipated by Box 1975. The Examiner has also rejected claims 1, 3-5, and 9-10 as being anticipated by Leone 1987. As a final alternative, the Examiner has rejected claims 1-5, and 8 as being anticipated by Helmer.

The Examiner has rejected claims 1-10 under 35 U.S.C. § 103 as being obvious in light of the combination of the Basara with Helmer. The Examiner also rejected Claim 2 as being obvious in light of the combination of Grapentine with various other references. The Examiner alternatively rejected claims 6-7 as being obvious in view of Leone 1987 in view of Hillmer. The Examiner also rejected claim 8 as being unpatentable over Leone 1987 in view of Hooley, et al. The Examiner alternatively rejected claim 8 as unpatentable over Box 1975 in view of Haugh et al. Finally, the Examiner also rejected claims 11-17 as being unpatentable over Didow et al. in combination with various other references.

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Applicant respectfully traverses these rejections based on the amendments herein and the arguments set forth below.

Rejections under 35 U.S.C. § 101

Claims 1-17 were rejected by the Examiner as allegedly failing to meet the requirements of 35 U.S.C. § 101 with regard to pertinence to the technological arts and production of a useful, concrete, and tangible result.

The Examiner has based his rejection of Claims 1-17 as lacking pertinence to the technological arts on his interpretation of each of the Claims as being able to be implemented either manually or by a computer. The Examiner finds this technological arts test in *In re Musgrave*, 431 F.2d 882 (CCPA 1970), *In re Toma*, 575 F.2d 872 (CCPA 1978), and *Ex parte Bowman*, 61 USPQ2d 1669 (Bd. Pat. App. & Int. 2001) (non-precedential). However, in a recent precedential opinion, the Board of Patent Appeals and Interferences held that there is no such "technological arts" test in 35 U.S.C. § 101. *Ex Parte Lundgren*, 76 USPQ.2d 1385, 1388 (Bd. Pat. App. & Int. 2005). Therefore, the examiner's rejections of claims 1-17 under 35 U.S.C. § 101 as lacking pertinence to the technological arts are respectfully traversed.

The Examiner has also rejected Claims 1-17 under 35 U.S.C. § 101 as allegedly failing to produce a useful, concrete, and tangible result. Particularly, the Examiner alleges that the invention claimed by Claims 1-17 fails to produce a concrete and tangible result.

Concreteness

The Examiner notes that several of the steps require subjective decisions on the part of a human research analyst. Particularly, the Examiner notes that the step of determining a market event is described only in terms of manual identification, and that such manual identification is

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highly subjective and depends on the investigative interest/goal and mood of the analyst. (*See* Office Action, p. 9, para. 20). Applicant respectfully disagrees. As Applicant's specification points out, this step should be performed by a research analyst who is familiar with the *particular* (emphasis added) market in the pharmaceutical industry, or may be performed by a research analyst familiar with the particular market being studied in any industry. (Specification, p. 5, l. 19-20).

The Examiner alleges that it is unclear whether the approach used by the applicant is compatible with certain market events correlated to the explanatory variables in the lagged model. (Office Action, p. 9, para. 20), (citing Edlund, Per-Olov, "Identification of the Multi-input Box-Jenkins Transfer Function Model," Journal of Forecasting, Jul-Sept 1984, Vol. 3, 297-308 at p. 297, l. 9-13) ("Edlund"). However, the same reference indicates that "by trial and error the 'right' model will eventually be found" and that the cross-spectral method of Box 1976 (p. 415-416), the contents of which are included by reference in the Applicant's specification (*See* Specification, p. 2, l. 26-27), will probably work well for such situations. (*See* Edlund p. 299, l. 24-41).

The Examiner also notes that Applicant's method distinguishes between only two particular effects of a market event at Steps 410 and 420, that being a shift in trend, marked by a changing slope in the plot of prescription data, versus when the prescription data exhibits a jump marked by a discontinuity. The Examiner alleges that if the market event identified in Step 210 does not produce such readily distinguishable results, Applicant's method would fail to be operable. Applicant respectfully disagrees. However, the amended claims make it more clear now that a market event may not have any discernable impact on product performance, in which case compensation for the event is unnecessary. (*See* Applicant's Claims 1, 9, 11, and 17).

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The Examiner has also alleged that several other steps require subjective decisions to be made, such as Step 230 (determining a relationship) which calls for the research analyst to specify the initial model structure with no suggestion as to how to distinguish among model fitting information, reasonableness of coefficients, and model robustness. Applicant's invention provides a utilitarian method and system for a trained technician to evaluate the impact of promotions on product performance. The Examiner points out that the outcome and interpretation of the study by R. P. Leone differs substantially from those of Wichern and Jones due to a different choice of intervention in modeling the impact of the American Dental Association's endorsement of Crest dental cream, even though both studies were accepted by peer-reviewed journals. (Office Action, p. 11, para. 22). Applicant respectfully disagrees that this supports the Examiner's conclusion. Wichern and Jones themselves realized that the estimated coefficients in their intervention model were unreasonably small, since a visual inspection of the data showed a drastic shift in market share at the time of the intervention. (Wichern, Dean W. and Jones, Richard H., "Assessing the Impact of Market Disturbances Using Intervention Analysis, Management Analysis, 1977, Vol. 24, No. 3, 329-337, 334) ("Wichern"). They attempted to explain it by stating that "approximate tests demonstrated that the true coefficients are not simultaneously zero." (*Id.*) Leone, also realizing that the coefficients were not reasonable, instead chose a step intervention model to account for the market event, as opposed to Wichern and Jones' pulse intervention model. (Leone, Robert P., "Intervention Analysis with Applications to Economic and Environmental Problems," Int'l. J. of Forecasting, 1987, Vol. 3, 463-478, 472).

Applicant's specification discloses that when product performance data is plotted versus time, the effect of a market event may take the form of a change in trend or a jump in the plotted

data. (*See* Specification p. 7-8). A visual inspection by the research analyst of the plotted data in Figure 1 of <u>Wichern</u> would reveal the jump in market share, and lead him to correctly specify a step intervention model.

The Examiner has also noted that if iterations of the method are necessary for the claimed invention to be operative, then the pending Claims require amendment to positively recite this element according to MPEP §2172.01. (*See* Office Action, p. 10, para. 21). Iterations of the method are not always necessary for the operation of the present invention, but the specification clearly discloses repeating the steps of the method using alternative choices if the model fitting information, the reasonableness of the coefficients, the model's robustness, or its ability to model the data indicates that the model cannot be validated. (*See* Specification, page 5, line 28 - page 6 line 2). Therefore, Applicant respectfully submits that the rejections of claims 1-17 as failing to produce a concrete result should be withdrawn.

Tangibility

The Examiner has rejected Claims 1-17 as failing to recite any limitations producing a tangible result. Applicant respectfully disagrees. As the Examiner noted and the Applicant disclosed in the application, an objective of the invention is to accurately measure the incremental prescriptions attributable to promotions. (Office Action, p. 12, para. 25). The specification has been amended to more accurately describe the steps inherent in "quantifying a relationship between said one or more promotions and said product performance..." (*See* Claim 1 at line 17). As such, it will now be clear to the Examiner that Claims 1-17 are directed to tangible subject matter and will produce a tangible result, the incremental prescriptions attributable to promotions, similar to a final share price, which has been held to be a practical application of a mathematical algorithm, formula, or calculation. <u>State Street Bank and Trust</u>

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Co. v. Signature Financial Group, Inc., 149 F.3d 1368 (Fed. Cir. 1998). The procedure for

determining the incremental prescriptions attributable to promotions is also disclosed in the

Basara reference, the contents of which are incorporated into the specification by reference.

(Basara, page 724, c. 2, l. 30 - page 728, c. 1, l. 4). Therefore, Applicant respectfully submits

that the rejections based on the claims failing to recite any limitations producing a tangible result

should be withdrawn.

Rejections under 35 U.S.C. § 112, ¶1

The Examiner has rejected claims 1-17 under 35 U.S.C. § 112, first paragraph, as failing

to comply with the enablement requirement. Many of these rejections are similar to the

rejections under the "concreteness" standard as addressed above. (See Office Action, p. 13-14,

para. 30). The Examiner notes that some steps of the Applicant's method that rely on the

"subjective participation" of a research analyst. As an example, the Examiner points out that the

step of determining a relationship ("Step 230") specifies the criteria of model fitting information,

reasonableness of coefficients, and model robustness, but does not give any more information.

Applicant respectfully disagrees. To a person of ordinary skill in the art, these terms by

themselves do give sufficient detail into how to figure out if the analyst has correctly

"determined the relationship." As explained previously, references such as Wichern and Leone

1987 show how analysts could tell that the model was specified incorrectly based on the

reasonableness of the coefficients, while the Basara reference, the contents of which are

incorporated into the specification by reference, gives an example of the use of model fitting

information to check the correctness of the model through the examination of whether the error

series was stationary and the use of the Box-Ljung statistic. (See Basara, p. 724, c. 1, l. 40 - c. 2,

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l. 4).

The Examiner alleges that Step 240, which relies upon Box and Jenkins ARIMA model fitting approach requires several subjective decisions on the part of the researcher, and the outcomes of the Approach vary greatly, including uninterpretable or undesirable results. (*See* Office Action, p. 15, para. 34) (citing Newbold, Paul, "The Principles of the Box-Jenkins Approach," Operational Research Quarterly, Jul. 1975, Vol. 26, No. 2, Part. 2, 297-412) (hereinafter "Newbold"). However, Newbold, makes clear that with some experience in the practical application of these methods, a user can greatly increase his chances for success, and that although the results obtained by two different researchers may not be necessarily identical, they can still be high-quality forecasts. (*See* Newbold, p. 398, l. 25-32). Newbold additionally points out that the more experience one has in using the technique, the less difficult it is to identify an appropriate model for the data, that extremely difficult models rarely appear in practice, and that examination of suggested models can usually allow a determination of which particular model to choose. (Newbold p. 409, l. 25 - p. 410, l. 17).

The Examiner also alleges Applicant's claims lack enablement based on the statement in Helmer that many of the model choices are resolved "on fairly ambiguous bases" and are "a matter of art". (*See* Office Action, p. 16, para. 34). However, in this area, Helmer is referring to the selection of models based solely on correlation patterns generated by the models and the data. (Helmer, p. 230, C. 2, l. 36-50). Applicant's specification teaches selection of the model based on comparison of the potential models, as well as the sign and significance of the coefficients of the variables in the models. (*See* Specification, p. 7, l. 9-13). These additional factors make the distinctions between model choices more apparent to one of ordinary skill in the art, and reduce the level of ambiguity.

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The Examiner again notes that the specification does not discuss selecting a functional form to account for a market event (Step 250) except in the terms of a gradual change in slope or an abrupt jump. (*See* Office Action, p. 16, para. 35). As discussed previously on page 16 of this amendment, these are the only forms that the effect of a market event on product performance can take. If no such effect is present, there is no need to account for it.

The Examiner also alleges that the step of evaluating the selected functional form ("Step 260") also lacks concreteness/enablement for the same reasons as those set forth regarding Step 240. (*See* Office Action, p. 16, para. 36). As explained previously, Applicant's specification teaches selection of the model based on comparison of the potential models, as well as the sign and significance of the coefficients of the variables in the models. (*See* Specification, p. 7, l. 9-13). These additional factors make the distinctions between model choices more apparent to one of ordinary skill in the art, and reduce the level of ambiguity.

Lastly, the Examiner also alleges that Shao (Shao, Y. Eric, "Multiple Intervention Analysis with Application to Sales Promotion Data," Journal of Applied Statistics, 1997, Vol. 24, No. 2, 181-191) discloses problems inherent in the Applicant's method that limit the number of market events that may be modeled at any one time. (*See* Office Action, P. 16, para. 37). Applicant respectfully disagrees. Shao applied Box-Jenkins transfer function and intervention analysis to a data set composed of roughly 70 observations, including many outliers, and then attempted to account for 15 interventions in the data. (*See* Shao p. 182, l. 16-26). Newbold discloses that outliers can have very drastic effects on the model identification process and that genuine outliers should be removed before model building is attempted. (Newbold p. 410, l. 35-39). Such a relatively small number of observations compared to the number of interventions to be studied, combined with the presence of many outliers in the data series, would necessarily

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lead to difficulties. One of ordinary skill in the art would realize that the Box-Jenkins approach cannot be applied with complete success to every problem, but that, when used in the proper way, and on the proper data, it can yield positive results. (*See* Newbold, p. 411, l. 34-42).

Rejections under 35 U.S.C. § 112, ¶2

The Examiner has rejected Claims 1-17 under 35 U.S.C. § 112. second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. (Office Action, p. 17, para. 40).

In particular, the Examiner has rejected Claims 1, 11, 15, and 17 as reciting limitations with insufficient antecedent basis.

The Examiner rejected Claims 1 and 11 as reciting limitations with insufficient antecedent basis for reciting "the impact of one or more promotions" in their preambles. (*See* Office Action, p. 17, para. 41). Applicant respectfully disagrees. This limitation is recited for the first time in these claims and does not lack antecedent basis, as it does not refer back to any previous limitation reciting "the impact of one or more promotions."

Additionally, the Examiner has rejected Claims 1-2, 4, 7, 8, and 11-12, 15, and 17 as reciting limitations rendering the scope of the claims indefinite in view of Applicant's disclosure. Claims 1-2, 4, 7, 8, and 11-12, 15, and 17 have been amended to address the Examiner's concerns and Applicant respectfully submits that they are now in condition for allowance.

Rejections under 35 U.S.C. § 102(b)

Claims 1, 3-7, and 9-10 were rejected by the Examiner under 35 U.S.C. § 102(b) as allegedly anticipated by Basara. The Examiner stated that there was not a clear distinction

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between a market event and a promotion explained in the application. In applying Basara, the Examiner interpreted "market event" to include one or more promotions. However, it is clear from the specification that "promotions" includes the impact of any particular promotions that the invention, "Promotional Impact Assessment Methodology" is to be used to evaluate, while "market events" includes any other event that occurs in the marketplace other than the promotion or promotions being evaluated that could affect product performance. (Specification, p. 3, l. 13-16; p. 5, l. 17; p. 4, l. 26; p. 9, l. 14; p. 8, l. 13-16).

Applicant respectfully disagrees that Claims 1, 3-7, and 9-10 are anticipated by Basara. As amended, Claim 1 is directed to a method for estimating the impact of one or more promotions on product performance for a product, including, inter alia, the steps of selecting one or more functional forms to account for any impact of each of said one or more determined market events, evaluating each of the selected functional forms to account for the one or more determined market events, and quantifying a relationship between the one or more promotions and said product performance for said product by taking into account said evaluated functional forms. No such technique is disclosed in or suggested by the cited art, either alone or in combination.

The researcher in Basara chose the particular promotional campaign to study because there were no market events that could affect product performance that occurred during the promotional campaign. (Basara at p. 719, c. 1, l. 5 - c. 2, l. 33). In Basara, a standard ARIMA noise model with intervention is used to determine the effect of the promotion on product performance, but, apart from a standard "noise" term in the equation, Basara does not disclose or suggest the selection of appropriate functional forms to account for market events, nor evaluating each of said functional forms to account for one or more market events, and then using said

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functional forms to quantify the relationship between said one or more promotions and said product performance.

Therefore, Basara fails to anticipate independent Claim 1 because it fails to disclose all of the elements of said independent Claim. Since Claims 3-7 and 9-10 directly or indirectly depend from Claim 1, at least for the reasons explained above they are not anticipated by Basara either. Accordingly, Applicant respectfully submits that Claims 1, 3-7, and 9-10 are not anticipated by Basara.

Claims 1, 3-7, and 9-10 were rejected by the Examiner under 35 U.S.C. § 102(b) as being anticipated by Box 1975 (Box, G. E. P. and Tiao, G. C., "Intervention Analysis with Applications to Economic and Environmental Problems," J. of the Am. Statistical Ass'n., 1975, Vol. 70, No. 349, 70-79). In applying Box 1975, the Examiner noted that the Noise figure disclosed in Box 1975, N_t, is a catchall function that attempts to take into account the impact on the output from all events other than the intervention being studied.

Applicant respectfully disagrees that Claims 1, 3-7, and 9-10 are anticipated by Box 1975. Although Box 1975 discloses that fitting the model can allow evaluation of the explanatory potential of the noise figure, which is the impact on the output from the market events, Box 1975 fails to disclose or suggest the steps of selecting one or more functional forms to account for any impact of each of said one or more determined market events, or evaluating each of the selected functional forms to account for the one or more determined market events, or quantifying a relationship between the one or more promotions and said product performance for said product by taking into account said evaluated functional forms, as required by Claim 1. Instead, Box 1975 discloses several standard forms that can be used for the noise function, the choice of which is determined by the data on the output variable collected, and the noise function

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is not analyzed until the model is fitted. (Box 1975 at p. 71, C. 1, l. 35 - C. 2, l. 2).

Therefore, <u>Box 1975</u> fails to anticipate independent Claim 1 because it fails to disclose all of the elements of said independent Claim. Since Claims 3-7 and 9-10 directly or indirectly depend from Claim 1, at least for the reasons explained above they are not anticipated by <u>Box 1975</u> either. Accordingly, Applicant respectfully submits that Claims 1, 3-7, and 9-10 are not anticipated by <u>Box 1975</u>.

Claims 1, 3-5, and 9-10 were rejected by the Examiner under 35 U.S.C. § 102(b) as being anticipated by <u>Leone 1987</u>. In applying <u>Leone 1987</u>, the Examiner noted that N_t, as disclosed in <u>Leone 1987</u>, represents the identified and evaluated promotion lag structure. (*See* Office Action, p. 26, para. 66). Therefore, the other terms comprising the output variable must reflect the impact of market events. (*See Id.*) Additionally, the Examiner stated that the N_t noise model is very flexible and able to contain multiplicative, seasonal, autoregressive, moving average, and difference terms to accurately reflect the behavior of the system beyond that of the explanations provided by the other terms comprising the output variable. (*See Id.*) However, <u>Leone 1987</u> does not disclose or suggest the steps of selecting one or more functional forms to account for any impact of each of said one or more determined market events, or evaluating each of the selected functional forms to account for the one or more determined market events, or quantifying a relationship between the one or more promotions and said product performance for said product by taking into account said evaluated functional forms, as required by Claim 1.

Therefore, <u>Leone 1987</u> fails to anticipate independent Claim 1 because it fails to disclose all of the elements of said independent Claim. Since Claims 3-5 and 9-10 directly or indirectly depend from Claim 1, at least for the reasons explained above they are not anticipated by <u>Leone 1987</u> either. Accordingly, Applicant respectfully submits that Claims 1, 3-5, and 9-10 are not

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anticipated by <u>Leone 1987</u>.

Claims 1-5, and 8 were rejected by the Examiner under 35 U.S.C. § 102(b) as being anticipated by <u>Helmer</u> (Helmer, Richard M. and Johansson, Johny K., "An Exposition of the Box-Jenkins Transfer Function Analysis With an Application to the Advertising-Sales Relationship," J. of Marketing Res., 1987, Vol. XIV, 227-239). In applying <u>Helmer</u>, the Examiner noted that N_t, as disclosed in <u>Helmer</u>, represents the market events, rather than the promotion being studied. (*See* Office Action, p. 27, para. 71). However, the Examiner also pointed out that N_t is the composite effect of factors that may affect the output variable, such as market events. (*See* <u>*Id.*</u>)

The portion of <u>Helmer</u> cited by the Examiner discloses the selection and evaluation of a single noise function to account for every market event that may affect product output. (Helmer at p. 230, C. 1, l. 47 - p. 233, C. 2, l. 13; p. 233 C. 2, l. 7-32). As disclosed in the specification, the work of Helmer and Johansson fails to accurately account for market events, which may result in an inaccurate model fit and inaccurate estimates of promotional effects. (*See* Specification, p. 9, l. 12-20). Since N_t must account for the effect of every market event, and can only take one form, <u>Helmer</u> does not disclose the steps of selecting one or more functional forms to account for any impact of each of said one or more determined market events which may impact said performance, nor evaluating each of said functional forms to account for said one or more determined market events, nor quantifying a relationship between said one or more promotions and said product performance for said product by taking into account said evaluated selected functional forms, as required by Claim 1.

Therefore, <u>Helmer</u> fails to anticipate independent Claim 1 because it fails to disclose all of the elements of said independent Claim. Since Claims 2-5 and 8 directly or indirectly depend

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from Claim 1, at least for the reasons explained above they are not anticipated by <u>Helmer</u> either.

Accordingly, Applicant respectfully submits that Claims 1-5, and 8 are not anticipated by

<u>Helmer</u>.

Therefore, Applicant respectfully submits that the rejections of claims 1 and 3-10 under

35 U.S.C. § 102 should be withdrawn.

Rejections under 35 U.S.C. § 103(a)

Claims 1-10 were alternately rejected under 35 U.S.C. 103(a) as being unpatentable over

<u>Helmer</u> in view of <u>Basara</u>. In applying the references, the Examiner alleged that the intervention

analysis technique of Basara could be incorporated into <u>Helmer</u>'s method to eliminate reliance

solely upon <u>Helmer</u>'s noise term to account for the influence of a market event on product

performance.

First, the combination of <u>Helmer</u> and <u>Basara</u> is improper. The Examiner suggests that the

Intervention Analysis of <u>Basara</u> be incorporated into <u>Helmer</u>'s method to account for the effect

of a predetermined market event. However, in <u>Basara</u>, the intervention analysis is used to

quantify the effect of the promotion being studied on product performance, while a noise

structure is used to account for the combined effect of market events. (<u>Basara</u> at page 722, C. 2,

L. 29 - 43).

In <u>Helmer</u>, the noise term, N_t, is used to account for the effect of market events on

product performance. To combine <u>Helmer</u> and <u>Basara</u>, the term (the intervention) that <u>Basara</u>

discloses is used to account for the effects of the promotion being studied must instead be used to

account for the effects of market events, which <u>Basara</u> suggests be treated as "noise". This term

must then be used as a substitute for the noise term in the <u>Helmer</u> analysis. Applicant

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respectfully submits that a person of ordinary skill would not be motivated to use the terms of

Basara in a way that is the opposite of what is disclosed in the reference, and then to use one of

the terms in a technique disclosed by a different reference, Helmer, in place of the noise term in

Helmer's equation. Nor would one of ordinary skill in the art substitute the terms of Basara for

the single noise term of Helmer multiple times to account for multiple market events when

neither reference discloses or suggests accounting for multiple market events individually.

In explaining why someone would look to combine Helmer and Basara, the Examiner has

cited a reference that explains that typically, in econometrics, models are misspecified because of

omitted variables. (Leone, Robert P., "Modeling Sales-Advertising Relationships: An Integrated

Time Series-Econometric Approach," Journal of Marketing Research, Vol. 20, Aug 1983, 291-

295, at p. 292, C. 1, L. 32-35) (hereinafter "Leone 1983"). However, the cited portion of Leone

1983 discusses analyzing the error term of a fully-specified model to see what insights can be

gained. It does not suggest that the error term may be replaced by other variables or analyses

that would control for the effects of market events.

However, even assuming a suggestion to combine the references, Helmer and Basara

together do not disclose or suggest all of the elements of independent Claim 1. The Examiner

suggests that Basara discloses or suggests the steps of determining one or more market events to

detect an abnormal event, selecting one or more functional forms to account for any impact of

each of said one or more determined market events. However, as explained previously, Basara

does not disclose or suggest determining multiple market events or selecting multiple functional

forms to account for each. Rather, Basara discloses analyzing the effect of a single promotion on

product performance in a situation where there were no market events.

Therefore, Helmer fails to render independent Claim 1 unpatentable in view of Basara

because the cited references, even in combination, did not make the subject matter of said

independent Claim obvious to one of ordinary skill in the art at the time the invention was made.

Since Claims 2-10 directly or indirectly depend from Claim 1, at least for the reasons explained

above they are not rendered obvious by Helmer in view of Basara either. Accordingly,

Applicant respectfully submits that Claims 1-10 are not rendered unpatentable by Helmer in

view of Basara.

The Examiner rejected System Claims 11-17 under 35 U.S.C. § 103 (a) as being

unpatentable over either one of Basara, Box 1975, and Leone 1987 or Helmer in view of Didow

et al. (Didow, Jr., Nicholas M. and George R. Franke, "Measurement Issues in Time-Series

Research: Reliability and Validity Assessment in Modeling the Macroeconomic Effects of

Advertising," Journal of Marketing Research, Vol. 21, Feb 1984, 12-19, herein "Didow"). The

Examiner explains that the primary references are relied upon for teaching the functional

limitations recited in Claims 11-17. Specifically, the Examiner alleges that any one of Basara,

Box 1975, and Leone 1987 teach the method elements corresponding to Claims 11, 13-15, and

17, while Helmer teaches method elements corresponding to Claims 12 and 16. (See Office

Action, page 36, para. 93).

The elements of Independent Claim 11 roughly correspond to the elements of

Independent Claim 1. As explained previously, none of the Examiner's primary references

disclose all of the elements of Independent Claim 1, nor does the combination of Helmer in view

of Basara render independent claim 1 unpatentable as obvious to one of ordinary skill in the art.

Since Claims 12-17 directly or indirectly depend from Claim 11, at least for the reasons

explained above they are not rendered unpatentable either. Accordingly, Applicant respectfully

submits that Claims 11-17 are not unpatentable over either one of Basara, Box 1975, and Leone

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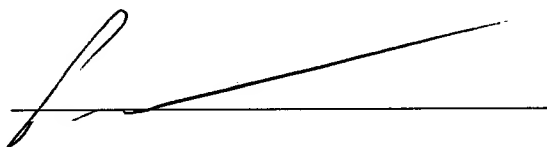PATENT

1987 or Helmer in view of Didow.

Therefore, Applicant respectfully submits that the rejections of Claims 1-17 under 35 U.S.C. § 103(a) should be withdrawn.

Accordingly, Applicant respectfully submits that the pending claims are in condition for allowance.

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CONCLUSION

In view of the foregoing remarks, favorable reconsideration and allowance of Claims 1-17 are respectfully solicited. In the event that the application is not deemed in condition for allowance, the examiner is invited to contact the undersigned in an effort to advance the prosecution of this application.

Respectfully submitted,

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Amendments to the Drawings:

The attached sheet of drawings includes changes to Fig. 2. This sheet, which includes Fig. 2, replaces the original sheet including Fig. 2. In Figure 2, previously omitted element step 297 has been added, and changes have been made to steps 220, 270, and 295.

Attachment: Replacement Sheet

Annotated Sheet Showing Changes

FIGURE 2

determine market events which may impact product performance - 210

⇓

Step 220 changed

generate descriptions and detect abnormalities - 220

⇓

specify relationship between promotions and product - 230

⇓

systematically detect promotion lag structure - 240

⇓

select functional forms - 250

⇓

evaluate impact of other variables 260

⇓

Step 270 changed

fit models from step 230 - 270

⇓

solve multicollinearity problems – 280

⇓

detect auto-correlation in residual – 290

⇓

Step 295 changed

evaluate model. if model fails evaluation, return to step 230   - 295

⇓

previously omitted Step 297

determine incremental product performance attributable to promotion - 297

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